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Reply to Office Action

Application No. 10/529,271

*AMENDMENTS TO THE CLAIMS*

1-11 (Canceled)

12. (Currently Amended) A method for controlling a cut register of a web-fed rotary press, the cut register representing placement of cuts on a web, the method comprising:

guiding a web leaving a last printing unit of the rotary press to a cross-cutting device via at least two pulling units with adjustable leads, there being no movable tensioning roller between the at least two pulling units, and wherein the pulling units are independently rotatable from one another and from the cross-cutting device; and

changing a circumferential speed of at least one of the pulling units to adjust the cut register.

13. (Previously Presented) A method as in claim 12, wherein the step of changing includes: detecting a first actual value of the cut register using a first cut-register sensor; feeding the detected first actual value of the cut register to a controller; comparing, by the controller, the detected actual value of the cut register with a cut-register setpoint value representing a predetermined desired placement of a cut on the web; adjusting, by the controller, a motor of said at least one pulling unit to change the circumferential speed.

14. (Previously Presented) A method as in claim 13, further including: providing a second cut-register sensor positioned at a second pulling unit upstream of said at least one pulling unit; detecting a second actual value of the cut register using the second cut-register sensor; deriving a differentiating proportion from the first and second actual values of the cut register; and applying, by the controller, feedforward control based on the differentiating proportion.

15. (Previously Presented) A method as in claim 13, further including: determining an actual state of the cut register based on a mathematical model; deriving a differentiating proportion from the actual state of the cut register; and applying, by the controller, feedforward control based on the differentiating proportion.

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16. (Previously Presented) A method as in claim 13, further including: supplying by the controller to a second pulling unit downstream of said at least one pulling unit a second setpoint value for controlling a lead of the second pulling unit.

17. (Previously Presented) A method as in claim 13, further including compensating by the controller a counteractive effect by forces of the web on a torque of the motor of said at least one pulling unit.

18. (Currently Amended) An apparatus for controlling a cut register of a web-fed rotary press having a web guided from a last printing unit to a cross cutting device via a plurality of pulling units, wherein the pulling units are independently rotatable from one another and from the cross-cutting device, there being no movable tensioning roller between the pulling units, and the cut register representing placement of cuts on the web, the method apparatus comprising:

a controller connected to a motor of at least one of the pulling units; and

a first cut-register sensor disposed to detect a first actual value of the cut register on the web and feed the detected first actual value to the controller, wherein the controller controls the motor to adjust a speed of said at least one pulling unit based on the first actual value of the cut register.

19. (Previously Presented) An apparatus as in claim 18, further including a second cut-register sensor connected to the controller and disposed at a second pulling unit upstream of said at least one pulling unit, the second cut-register sensor detecting a second actual value of the cut register and feeding the second actual value to the controller, the controller applying feedforward control based on the second actual value.

20. (Previously Presented) An apparatus as in claim 18, further including a computing unit connected to the controller, the computing unit calculating an actual state of the cut register based on a mathematical model, the controller receiving the calculated actual state from the computing unit and applying feedforward control based on the calculated actual state.

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21. (Previously Presented) An apparatus as in claim 18, wherein the controller is further connected to a motor of a second pulling unit downstream of said at least one pulling unit and provides to the second pulling unit a setpoint value representing a predetermined desired placement of a cut on the web for controlling a lead of the second pulling unit.

22. (Previously Presented) An apparatus as in claim 18, wherein the controller controls said at least one pulling unit to compensate for a counteracting effect by forces of the web on a torque of the motor of said at least one pulling unit.

*This listing of claims replaces all prior versions, and listings, of claims in the application.*